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Information Environments: Design Research and the Everyday

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This paper proposes 'Information Environments' as a new field for design exploration reflecting current trends in professional graphic design practice but also in relationship to the shifting paradigms of our contemporary information and knowledge-based society. I have been asked to talk about the development of the research unit for Information Environments (IE) – a newly established group at the University of the Arts London, which brings together 30 art and design researchers and educators with external partners in government, industry and design agencies, to explore the way in which information is sent, received, mediated and understood in both physical and virtual spaces. A selection of research projects undertaken by IE members will be explored in relationship to defining what is meant by 'information', establishing its history, engaging with the communities and environments in which it is disseminated and the technologies used in its mediation.

Information is all around us. It's there when we turn on the television or radio and hear the latest news flash, log online to surf *Wikipedia* or use *Google*, or rely on directional signs to get to a destination. Billboards tell us what to buy and posters warn us of the dangers around us. Oversized screens in city centres tell us about local and global events. Information shapes our behaviour and informs our perceptions of the everyday. Yet, as designers, how might we better understand the mediation of information within the context of its various

environments? Perhaps it is no surprise that the discipline of Graphic Design and its role in the communication field has shifted dramatically over the last decade – primarily in response to new digital technologies and the recognized multimodality of the informational landscape.

How Might we Define 'Information'?

Defining what is meant by 'information' has long been the undertaking of key academics in the disciplines of communication, mathematics, information and computing sciences [e.g. Shannon and Weaver 1949, Roszak 1986] as well as by cultural theorists [e.g. Chomsky 1988, Manovich 2006]. Whether considering information as instructional, informative or as propaganda, each discipline has its own view. Robert Losee [1997], on the other hand writing in the *Journal of the American Society for Information Science*, proposes an all-encompassing definition where information is 'the characteristics of the output of a process, these being informative about the process and the input.' Such a general definition 'allows frameworks, theories, and results to be transferred across disciplinary boundaries, and provides for dialogue across these boundaries, while at the same time allowing individual disciplines to focus on the specific information phenomena of their discipline.' [Losee 1997: 2] [Fig. 1 → 265] Information is characterized by its 'newness'; its informational impact, and described in terms of 'information carrying' or 'information producing'. [Losee 1997: 3] Elsewhere, Shannon and Weaver's now classic model diagrammed the way in which information/messages move from one point to another taking into account the points and processes of transmission, reception, mediation and the 'accuracy of understanding'. As we know, this model has had a profound influence on the visualisation of information. Information designers are in the business of Graphic Design to translate and structure what 'cannot be understood as matter or as energy' [Erloff and Marshall 2007: 214] into a form which is made accessible and communicates effectively to an end-user. In this way, designers cannot ignore the integral links between what information *is*, *how* information is communicated and to *whom* – each having a direct bearing on interpretation, the creation of meaning and ultimately, knowledge.

Information and the Everyday 'Environment'

As an example of the way in which information is sent, mediated, received and understood within the everyday environment, it is worth taking as a starting point my journey each day from home to work.

Once outside my front door, my journey to work takes me through the centre of the local high street where video surveillance cameras keep a vigilant eye as I make my way to the mainline train station. En route, I take a call from the office on my new hand-held personal device – an iPhone with full GPS, internet connection, and image-making functions. Once in the train station I check the digital departure screen to confirm the expected arrival time of my train before pulling out my Oyster Card and swiping it across the sensor on the barriers to allow me entry to the train platform.¹ Once through the barriers, I catch a glimpse of an image of myself amongst the chaos of the morning's commuters transmitted on a series of 12-inch video monitors set dangling above the barrier, before taking the stairs up to the platform to catch the London Waterloo train. Once on the train, LED signs confirm for me where the train is going, while miniature surveillance cameras tucked in the corners of the train carriage supposedly ensure safety. A similar pattern of monitoring continues once I depart from the train at Waterloo Station.

Eric Sadin describes the city as 'an ensemble of data' and a 'network of public equipment through which this data circulate(s)'. [Sadin 2007: 191] What I have described as part of my journey has highlighted the way in which we are subjected to a process of 'screening' for data when the 'electronic profiles of daily life' are captured. [Amoore: 2007: 140] And yet, the visual preponderance of video monitors, digital signs and surveillance cameras encountered on my journey are also intended to be 'vigilant modes of visibility' – a phrase which Louise Amoore [2007] uses to describe the 'watchful eyes' of a post-9/11 culture. A manifestation of the West's concerns about a terrorist threat, this visibility of equipment clearly indicates a paradigm shift in communication practices – in how information is seen (or *heard*, in the case of, for example, the train station's tannoy system) and as a 'carrier' and 'producer' of meaning.

Digital technology has facilitated the advent of the city as an 'augmented space' where physical space is 'overlaid with dynamically changing information.' [Manovich 2006: 220] The city is now read as 'spatialized textual propositions' of multimodality 'in which common semiotic principles operate in and across different modes.' [Kress and van Leeuwen 2001: 2] While information is linked to behaviour, it is also linked to notions of power relations. We only have to be reminded of George Orwell's fictional accounts of the Ministry of Truth and its control of information (read propaganda) to the masses.

However, information also redefines our relationship to the spatial environment. The philosopher Vilém Flusser has observed: that 'the architecture no longer designs objects, but relationships... Instead of thinking geometrically the architect must design networks of equations.' [Flusser in Sikiaridi and Vogelaar 2006: 83] Information in our urban environment forms complex systems of social and communication networks. It is also mediated through scale – that which is monumental, for example the informational facades of Times Square – and also miniaturized (and portable) communication networking devices such as PDAs. Information has become at the same time public/private; global/local, while at the same time fluid, flowing easily between the physical environment and emerging spaces of digital information. The emergence of a new spatial hybridity has been described as 'soft urbanism', which is to say the 'dynamic interaction' between 'information-communication processes in public spaces.' [Sikiaridi and Vogelaar 2006: 86]

Research Unit for Information Environments

It is clear that the shifting paradigms in our contemporary information and knowledge-based society demands further study. And, it is with this in mind that the University of the Arts London research unit for Information Environments (IE) was established in July 2007, bringing together 30 researchers from across the University working in the areas of fine art, graphic design, architecture, typography history, theory and visual culture. Many of the researchers maintain active links to professional practice whilst also engaging in teaching on degree programmes at the University.

We define Information Environments as any physical or virtual spaces which are populated by communities, such as those found in common areas of urban spaces, museums, the Internet and learning environments, and where the exchange of ideas, concepts and knowledge is communicated. The Unit takes as its starting point communication and information in relationship to the three main thematic areas of History/Community/Technology. The unit functions as a catalyst for facilitating critical and practice-led engagement with what is meant by information and environments in this past, present and future contexts.

As a relatively new research unit, we are still in the process of developing both individual and collaborative projects that engage with issues about information and communication within specifically defined environments. The following projects should be viewed as 'research in progress' rather than providing a reflection of final outcomes. However, the process under which many of them came into being – in particular, those which involved external interdisciplinary partners, is worth noting. The development of the Unit as an organisational entity with collaborators (internal and external project members) has become a focus of developing a methodological approach to Unit activity. Such interactions are manifest in meetings between researchers in engineering, business management and product design from Cranfield University in Hertfordshire, with whom we are currently developing collaborative projects in the areas of nanotechnology, defence and resilience and social networks/future cities.

However, in this paper I would like to profile four projects undertaken by IE members which may be categorized under the three general themes of information in relationship to: transformational environments, interactive environments, and learning environments.

Theme 1: Information and Transformational Environments

One of the areas IE is involved with deals with the nature of fine arts practice and the urban experience. One such example is the recent exhibition 'Sound proof' held at E:vent Gallery in London. In her role as co-curator (with gallery owner Colm Lally), IE member Monica

Biagioli invited six artists to share their responses to the site of the 2012 London Olympic Games (situated in the Lower Lea Valley in East London). The chosen venue for the main Olympic Park site, along with its surrounding neighbourhoods is in a period of radical regeneration from being one of London's poorest areas to an international sports venue. The transformation of the area has been described as 'the most extensive ... since the Victorian era.' [BBC News 2003] The invited artists used sound materials, drawings and annotations as a way documenting their observations and experiences. Recordings became a form of 'audio cartography' mapping perceptions of the East End's immigrant population in relationship to perceived threats of terrorism, through to the recording of local wildlife and bird sounds. The result was six one-hour sound recordings assembled into a six-hour programme with an accompanying set of visual maps produced in a limited edition publication. Here information – as the visual map – is mediated through sonic arts practice.

In the same way that sonic arts practice mediates spatial transformation, so too might we use the techniques and methods of oral history to help local community voices be heard. A 'Sense of Place: The Lives and Histories of Residents from the Aylesbury Estate' emerges not only from the physical geography and architecture of a defined area, but more importantly through the people who inhabit these spaces. The main intent of the project is to explore a 'sense of place' as remembered and understood by the Aylesbury Estate, South London. Originally built in 1963, the estate has a long and varied history. With the new plans for the estates regeneration as part of the Elephant & Castle project, this 'New Deal for the Communities' estate is undergoing a significant period of change. The aim of the project is to capture the rich diversity of the estate as it is and was, by enabling residents to document and (re)present their own reflections, personal memories and historical accounts of life on the estate. This project is about collecting life stories rooted in the past but creating a receptacle for 'living oral histories'.

At the same time, 'A Sense of Place' is providing an opportunity to look at collaborative design methods in local community situations, but also to explore the applications of oral history as a method in

the service of Service Design. An aspect of this research is to take Richard Buchanan's notion of service design as 'service' in the improvement of people's lives, and aims to locate a place for Oral History within that definition using the regeneration of the Aylesbury Estate as a case study. At its most basic level, Service Design is about face-to-face interactions and promotes the use of communication design methods and role-playing. Part of this process involves conversations, and it is here that Oral History as a method and La Tour's notion of Actor-Network-Theory as a framework are of potential interest.²

Theme 2: Information and Interactive Environments

In the autumn of 2007, Peter Anderson was appointed as the unit's Research Fellow for Information Environments. Anderson, who is Director of Peter Anderson Studio Ltd. is a graphic artist and designer whose work over the years has achieved international acclaim. The Altnagelvin Hospital project in Northern Ireland is an example of his ongoing interest in developing work across fields spanning the theoretical as well as physical, and the technological potentials of materials. In this case, he means development of branded artworks made, at best, to help healing directly; at worst to provide a positive distraction in order to help healing. This hospital work is designed to engage the viewer from different perspectives and to provide a focal point and symbol of restfulness and intrigue for the hospital. The work is due to be completed later this year.

Theme 3: Information and Learning Environments

'My desk is very messy and chaotic. I collect anything and everything ... I suppose this is why the [design] process for me cannot be linear.' [student observation, 2007]

In the late 1970s, the emergence of new-build campuses in the United States brought with it an early review of how traditional notions of the classroom as a space were considered. Educators focused on how the design of the campus itself became a metaphor for an 'educational world-view', as well as a concrete expression of the nature of knowledge and the process of teaching and learning. In other

words, 'Any statement about where one learns is necessarily a statement about how one learns.' [Whisnant 1979: 549] Taking this as my starting point, I have become interested in exploring how the contemporary graphic design studio in higher education might be understood as an environment which impacts learning and the design process.

This project was conducted with students enrolled on the Graduate Certificate/Diploma Design for Visual Communication course, LCC, as part of the teaching of a two-week project on design research methods. Students had previous undergraduate degrees in subjects other than Graphic Design. Their understanding of discipline-based methods emerged from the diagnostic mapping of their research process. Students were also asked to photograph the workspaces where they developed ideas and solutions to course briefs. While the findings of the project confirmed, for example, that scale of space impacted scale of processes and final solutions, it also suggested that students found ways to 'reimagine' their solutions using digital spaces. Further image analysis also revealed the way in which working environments were adapted to function as striated and nomadic spaces. [Deleuze and Guattari 1987] This has led to further work for developing a theoretical framework for exploring the relationship between learning and spatial needs.

Members of IE are also working together toward an exhibition to be held in July this year drawing together a selection of current projects. It is hoped such an approach will inform and engage broader discussions around the future of space and learning environments. The exhibition is divided into the following indicative themes using case studies and/or blue-sky prototypes/visualisations: Creative Spaces and Places, Rethinking Learning Spaces and Transcending Spaces.

Conclusion

There is no doubt that information is a defining characteristic of the everyday experience. We are aware that our current definition of information is broad. However, it is hoped that through the research projects undertaken by IE members that a more focused set of criteria will emerge.

Information	
	aesthetics
	age
	architecture
	flow
	landscape
	management
	mining
	modelling
	overload
	revolution
	science
	society
	superhighway
	technology
mis	information
dis	information

Fig. 1: Examples of quantifying/defining the term 'information'. → 258

Endnotes

1 The Oyster Card is a form of electronic ticketing that was introduced to London's transportation (2005) using RFID technology (radio frequency identification). Amongst other things it tracks customer's movements while also allowing for the collecting of personal data.

2 This idea is expanded in: Triggs, T. 2008. 'Oral History in the Service of Service Design'. Forthcoming paper to be presented at the *Networks of Design* conference, University College Falmouth, 3–6th September 2008.

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